



RYA Logbook Theory Notes

Stage 2

Using These Theory Notes

These notes are not intended to totally cover the theory in each stage but instead to provide a guide for students of the RYA Youth Sailing Scheme to supplement their learning from courses and activities.

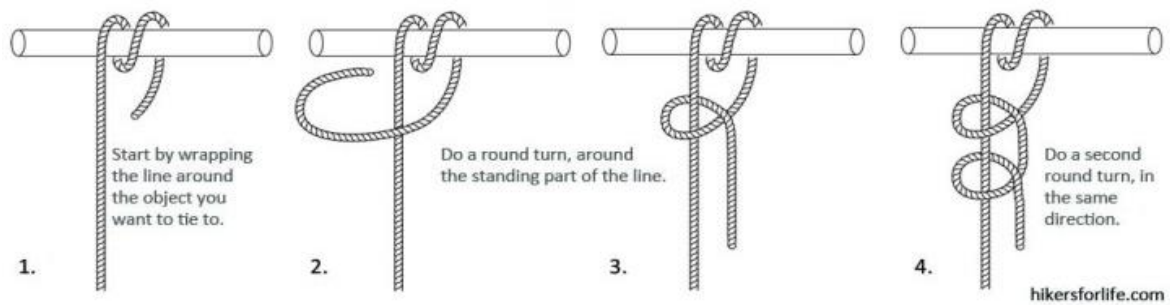


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Ropework

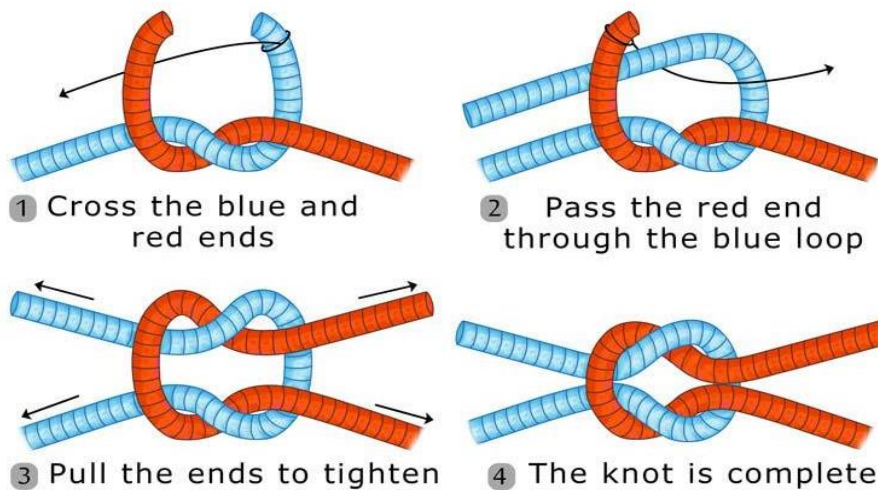
Round Turn and Two Half Hitches

Used to tie boats to a pier or slipway, allows for the fall and rise of the tide without damaging the boat. Puts tension on the line as the round turn takes the weight when the tide falls



Reef knot

Used for tying two ropes together of the same diameter. Will untie when slack (no weight/tension on it)



Ropework Videos

- [Check out our video tutorials here...](#)

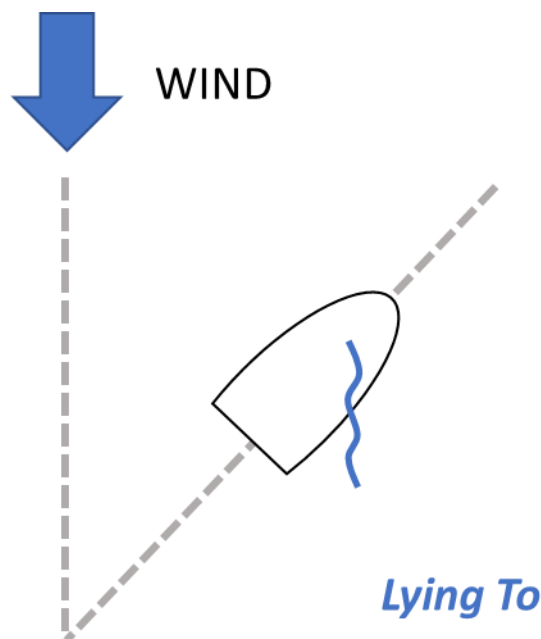
Can control speed and stop by lying-to

Controlling Speed

- One of the first things you need to remember when sailing is that a flappy sail is not a happy sail!
- To sail properly you want the sails to be filled, so not flapping, therefore to slow down you have to spill the sails, you let them flap.
- It is important that you understand the sail setting for each point of sail so you can fill and spill the sail accordingly.
- The points of sailing affect how you move your sail to speed up or slow down.
- When you're upwind, to slow down, you let the mainsheet out a bit until you start to slow down, but, when you're going down wind, you pull the mainsheet in all the way to slow down.
- Small movements in and out of the mainsheet will allow you to control your speed.
- For double handers, keep in mind the jib affects the speed too.
- We use this theory in a follow the leader exercise on the water and also in more advanced manoeuvres.

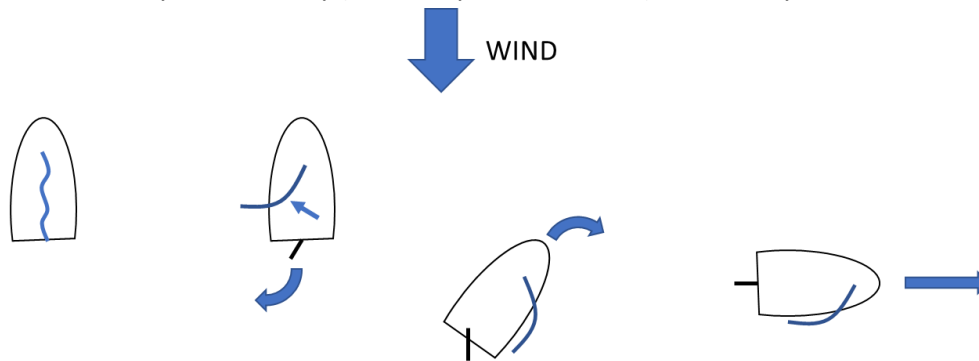
Lying-to

- This is a quick way of stopping while sailing upwind.
- Use your knowledge of speed control to slow your boat down, let your sail out until it's flapping.
- This effectively keeps your boat in an upwind position while your sail is in a head to wind position.
- This is used in certain manoeuvres or if an instructor wants to talk to you while afloat.



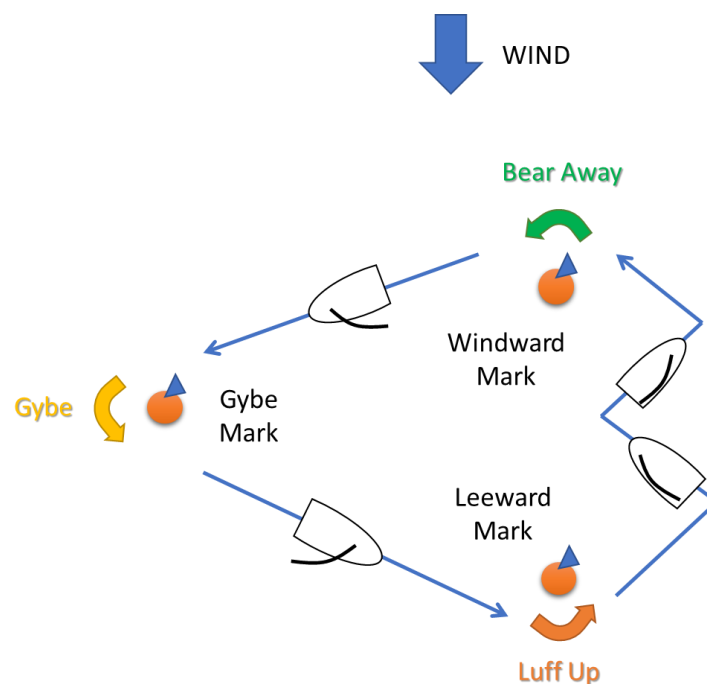
Can get out of irons

- “In irons” is another way of saying head-to-wind.
- The method for this is to sail backwards slightly.
- Push the sail towards the wind and the tiller in the same direction.
- You’ll start moving backwards and turning in the direction you put the tiller in.
- Once this happens you can then pull the tiller towards you and pull in the mainsheet.
- This will make you bear away (turn away from the wind) and allow you to continue sailing.



Can sail a triangle course

- A triangle course is laid with three marks, a windward, leeward and gybe mark.
- The windward mark is closest to the wind, leeward is furthest away from the wind and the gybe mark makes up the third part of the triangle on the downwind part of the course.
- Sailing up from the leeward mark to the windward should be done by sailing on a beat (sail in all the way, lots of tacking).
- Rounding the windward mark, start letting you sail out to start downwind (Bear Away).
- At the gybe mark you’re going to gybe, (remember; tiller away from the sail, the boom moves quickly so be careful) continue to sail downwind towards the leeward mark.
- When rounding the leeward mark pull the sail in as you’re going up onto a beat again.



Understanding the following

You should be thinking about these if you can while on the water. While you don't fully need to apply them afloat for stage 2, you should know about them and try to apply them afloat as much as possible.

The Five Essentials

What they are:

- **Sail Setting:** Where the sail is compared to where the wind is coming from.
- **Daggerboard:** how far the down daggerboard is to be the most effective at stopping the boat from drifting.
- **Boat Balance:** keeping the boat balanced by sitting on the correct side.
- **Boat Trim:** how far forward of back you're sitting to keep the boat flat.
- **Course Made Good:** sailing the fastest and shortest distance effectively between two points.

	Beat	Reach	Run
Sail Setting	All the way in	Half way in/out	All the way out
Daggerboard	All the way down	Halfway down	$\frac{3}{4}$ of the way out
Boat Balance	Keep the boat flat	Keep the boat flat	Keep the boat flat
Boat Trim	Forward	Forward	Slightly back
Course Made Good	The route between two points that gets you there the fastest, usually the shortest distance, but not always.		

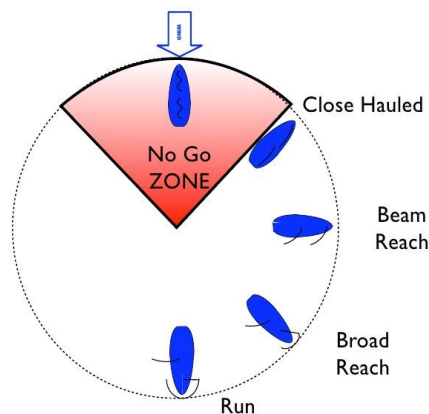
Returning to a beach or pontoon in offshore winds

- Offshore winds are blowing off land straight onto the sea, normally giving it waves that break with white tops.
- To sail into this to return to a beach or pontoon you will have to sail on a beat.
- As you get closer to a beach start raising your daggerboard so you don't damage your boat.
- Start slowing down by letting your sail out to depower the boat.
- Make sure your daggerboard is out and rudder up before you put the boat on the trolley.
- The only thing that changes when returning to a pontoon is you don't have to worry about your daggerboard or rudder being up.

Sailing Manoeuvres

Understands the No Go Zone

- This is the direction in relation to the wind where you cannot sail.
- It's a 45° angle either side of where the wind is coming from where your sail cannot be filled.
- If you are in this area you are in irons (head-to-wind).
- It is best to always try and avoid this area while sailing as when in this position the boom swings in the middle of the boat and cannot be controlled and may injure you.



Understands the terms windward, leeward and gybe

We use these terms together for certain courses such as a triangle course.

- **Windward** means closest to the wind e.g. the mark closest to the wind in a course.
- **Leeward** means farthest from the wind, e.g. the mark that is farthest from the wind in a course.
- **Gybe** means turning away from the wind, unlike a tack which is turning into the wind, this would describe the mark where you gybe in a triangle course.

Has general knowledge of:

Offshore and Onshore Winds

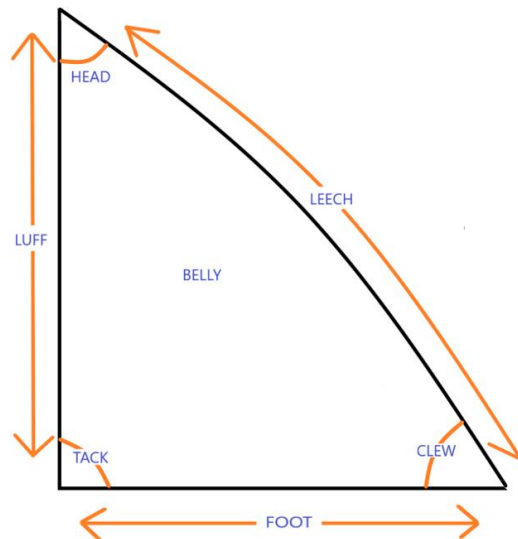
- **Offshore winds** are winds that blow off the land and onto the sea, this slows up wave breaking meaning the wave will move into shallower water and be steeper before it breaks.
- **Onshore winds** are winds that blow from the sea onto the land, this results in a sea state of chop and small waves that mix in with any incoming swell, it also tends to make waves break early.

Spars and Rigging

- **Spars** are the poles on your boat, i.e. mast, boom, spinnaker pole etc.
- **Rigging** are all the ropes and any wires used to hold up the spars, i.e. halyards, mainsheets, kickers

Parts of the Sail

- There are different names for the different areas of the sail.
- See the image below for example:



PARTS OF
A SAIL

Sail Controls and Foils

- Foils are the parts of the boat that are underwater, the daggerboard and rudder.
- The sail controls are all the components used to manoeuvre the sail, including the traveller, mainsheet, kicker.

Telling Someone Ashore

- Telling someone when you're going out on the water and a rough time frame of how long you'll be gone very important.
- Communicating where you'll be is also important so the person you tell knows where you should be if you're late.

The dangers of man-made hazards

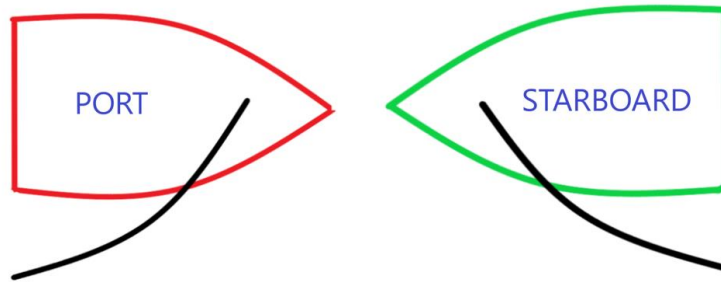
- Man-made hazards are around on the water and on the land.
- The hazard is anything that can damage your boat and in turn yourself.
- Anything that can get wrapped around your foils such as marks, rocks, lines in the water.
- Things such as overhead wires on land can damage the spars on the boat.

Rules of the road

The Port/Starboard rule

- The first thing you need to know is that the left side of the boat is the port side (associated with the colour red), the right side of the boat is the starboard side (associated with the colour green).
- When you're sitting on the starboard side with the sail on the port side you're on what is called a starboard tack, and it applies when sitting with the sail on the other side but is called a port tack.

- When two boats are travelling towards each other they are on opposite tacks, when this happens the boat on the starboard tack is what's called the stand-on vessel.
- The stand-on vessel is also known as the vessel which has right of way.
- This means the vessel on port tack must move out of the way of the other vessel.
- In the below image the boat on port tack (red boat) should move out of the way of the boat on starboard tack (green boat).



Meteorology

Understands several ways of finding wind direction. There are a few ways of finding the direction.

- The easiest way is using flags, they flow away from the wind.
- Single moored boats are another easy way to find the wind direction, they swing from the point of the mooring and face into the wind.
- Burgees and wind veins on boats can be used while on the water and away from land where flags and moored boats can be seen.
- You can also use your face to feel for the wind, but it's not so accurate in light winds but very useful away at sea.

Extra Notes...

Students on stage 2 should start looking at weather forecasts at this level. The best place to look is at Met Eireann's Sea Area Forecast, available from their website www.met.ie.

[Sea Area Forecast Link](http://www.met.ie)